radiotherapy was US $412.14 (SD: US $46.52). The mean cost per patient in each clinical stage to chemotherapy was I: US $3166.99 (SD: US $2258.67), II: US $3843.45 (SD: US $1381.09), III: US $5254.36 (SD: US $922.43), IV: US $2500.40 (SD: US $1323.60) and the non classified: US $2565.25 (SD: US $1356.95) p 0.551. **CONCLUSIONS:** The results show that in México, in more expensive the treatment to patients with non-hodgkin lymphoma in clinical stage III.

PCN56

COSTS ASSOCIATED TO THE TREATMENT OF DIFFERENT STAGES OF MEXICAN BREAST CANCER PATIENTS

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OBJECTIVES: To describe costs associated to the treatment of different stages of breast cancer patients at the Social Security Mexican Institute (IMSS) from the health care payer's perspective. **METHODS:** A cost study was elaborated. Resource use and cost data were obtained from hospital (second and tertiary levels) records of 313 of treated patients during July 2008 to February 2009 using the following inclusion criteria: women older than 16 years with breast cancer histological diagnosis who accepted to be included in the protocol through informed consent. Although, patients excluded were those who showed a second malignant neoplasm or incomplete information. We calculate mean, median, 95% confidence interval (95% CI) for each clinical stage and statistical differences were estimated through ANOVA tests, p value <0.05 was considered significant to show differences. **RESULTS:** The median total cost per patient was found in US $6135.38 (95% CI, US $4216.19–US $9737.19); the median cost per chemotherapy cycle was US $615.48 (95% CI, US $425.98–US $1456.63); all chemotherapy treatment resulted in US $2702.03, (95% CI, US $1456.36–US $5503.49) and median costs per patient with radiotherapy resulted in US $1260.78 (95% CI, US $421.34–US $1260.78). The mean cost per patient in each clinical stage with chemotherapy was: I: US $1830.80 (95% CI, US $686.21–$2975.39); II: US $5143.41 (95% CI, US $3570.19–$6716.62); III: US $4079.77 (95% CI, US $2739.86–$5419.68); IV: US $4907.21 (95% CI, US $672.11–$9142.31) and the non classified patients: US $5250.66 (95% CI, US $3360.94–$7140.40); p = 0.401. **CONCLUSIONS:** The results showed that at the IMSS, it is more expensive the treatment of breast cancer patients in clinical stage II; however, the less expensive treatments resulted for patients in clinical stage I. In addition, the treatment of non classified patients were the second most expensive according to our results.

PCN57

COSTS ASSOCIATED TO THE TREATMENT OF DIFFERENT STAGES OF MEXICAN PATIENTS WITH COLORECTAL CANCER

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OBJECTIVES: To describe cost associated to the treatment of different stages of colorectal cancer at the Social Security Mexican Institute (IMSS) from the health care payer's perspective. **METHODS:** A cost study was made. Resource use and cost data were obtained from hospital (second and tertiary levels) records of 115 treated patients from July 2008 to February 2009 using the following inclusion criteria: patients older than 16 years with colorectal cancer histological diagnosis who accepted to be included in the protocol through informed consent. Although, patients excluded were those who showed a second malignant neoplasm or incomplete information. We calculate mean,standard deviation (SD), median, 25 percentil and 75 percentil for each clinical stage and statistical differences were estimated through ANOVA tests, p value <0.05 was considered significant to show differences. **RESULTS:** The median total cost per patient was US $3,263.52 (US $2,111.29 to US $4,881.14), the mean cost per chemotherapy was US $484.16 (SD: US $113.95), mean cost to radiotherapy was US $402.40 (SD: US $57.20). The mean cost per patient in each clinical stage to chemotherapy was I: US $247.21 (SD: US $247.21), II: US $482.48 (SD: US $208.96), III: US $393.75 (SD: US $192.35), IV: US $986.17 (SD: US $631.59) and the non classified: US $386.88 (SD: US $105.18) p 0.521. **CONCLUSIONS:** The results show that in México, in more expensive the treatment to patients with colorectal cancer in clinical stage IV, the cheapest treatment was to patients in clinical stage I, the treatment to clinical stage II patients are the second most expensive according our results, probably associated to longer hospital stay.

PCN58

BEVACIZUMAB FOR THE TREATMENT OF METASTATIC BREAST CANCER: A COST-EFFECTIVENESS ANALYSIS

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OBJECTIVES: Novel chemotherapies for metastatic breast cancer (MBC), such as bevacizumab, have the potential to extend progression-free survival but with a financial burden to health systems. We estimate the cost-effectiveness of bevacizumab in combination with paclitaxel as compared to paclitaxel alone from the perspective of the United States Medicare system. **METHODS:** We constructed a hybrid decision tree-Markov model to follow a cohort for ten years composed of 10,000 women ages 65 and older with a diagnosis of MBC and no prior chemotherapy in the metastatic setting. Individuals in the model transitioned between three distinct states: stable disease, progressive disease, and death. Transition probabilities, cost and outcome data were obtained from clinical trials, published Medicare reimbursement rates, and the peer-reviewed literature. Incremental costs per quality-adjusted life year (QALY) were valued in 2009 US dollars. We discounted costs and survival at 3% per year. Deterministic and probabilistic sensitivity analyses tested the robustness of the model to variation in key parameters. **RESULTS:** In the base-case scenario, the bevacizumab plus paclitaxel arm had 22 additional days in quality-adjusted survival at an additional cost of $104,102 per patient, resulting in an incremental cost-effectiveness ratio (ICER) of $1.7 million/QALY. In the probabilistic sensitivity analysis, the ICER plane of 1,000 Monte Carlo simulation trials resulted in bevacizumab being more costly and more effective in 66.8% of samples and the dominated strategy in 34.1% of samples. In the deterministic sensitivity analysis, results were robust to changes in cost and utility parameters. Variation in time in progressive state and overall survival resulted in higher costs and slightly better outcomes; however, none of the sensitivity tests had positive ICERs below $50,000/QALY. **CONCLUSIONS:** Given the high cost in relation to its survival benefits, it is unlikely that adding bevacizumab for MBC would be a cost-effective allocation of Medicare resources.

PCN59

THE POTENTIAL ECONOMIC BENEFITS PROVIDED BY COMBINING CISPLATIN WITH SRC INHIBITOR KX1–004 FOR CANCER REGIMENS

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OBJECTIVES: Cisplatin is a chemotherapeutic agent which is widely used and studied for multiple cancer types; however certain types of toxicity (ototoxicity, nephrotoxicity and neurotoxicity) are associated with Cisplatin. Preclinical studies, performed on human testicular cancer cell lines, have indicated that combining Cisplatin with a Src Inhibitor (KX1–004) may significantly mitigate toxicity related damage. To utilize the results from preclinical studies examining the benefit of combining Cisplatin with KX1–004 in conjunction with cost of illness estimates from the literature to estimate the potential economic benefits which could result from KX1–004 utilization. **METHODS:** Data from preclinical studies examining the toxicity limiting efficacy of KX1–004 was combined with clinical and economic data from the literature with respect to the estimated cost of health care resources related to the specified toxic effects. This efficacy and costing information was combined within a decision tree model to estimate the potential cost savings. **RESULTS:** The preclinical data indicates that KX1–004 may have a protective effect with respect to the neurotoxic, nephrotoxic (22% less damage) and ototoxic (82% less damage) effects. The Src inhibitor, when used alone and in conjunction with Cisplatin, exhibited the potential to slow tumor growth and maintain overall body mass. The economic modeling resulted in a potential per patient cost savings of $1633 resulting from mitigation of the ototoxic and nephrotoxic effects. **CONCLUSIONS:** Recent research has indicated that Cisplatin should be considered as a component of the standard therapy regimen for certain cancer types; however toxicity remains a significant concern. When Cisplatin is used within a regimen which includes KX1–004, the benefits may include decreased damage due to toxicity and an improvement in quality of life. The Src inhibitor may also provide a survival benefit by enabling patients to remain on a regimen which includes Cisplatin.

PCN60

COST-EFFECTIVENESS OF OXALIPLATIN AND IRINOTECAN BASED COMBINATION THERAPY COMPARED WITH 5FU/LV FOR THE TREATMENT OF US ELDERLY ADVANCED COLON CANCER PATIENTS

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OBJECTIVES: Clinical trials have shown a statistically significant disease-free survival benefit of oxaliplatin or irinotecan based combination therapy for stage IV colon cancer. However, less is known regarding the comparative effectiveness and cost-effectiveness of these agents among elderly patients. Whether the additional benefit of these two agents is worth the additional cost for elderly Medicare recipients is particularly policy relevant. **METHODS:** A cost-effectiveness analysis of oxaliplatin or irinotecan based combination therapy versus 5-fluorouracil/leucovorin (5FU/LV) in patients aged 66 or older with stage IV colon cancer was performed from a US Medicare health care payer perspective. Survival and direct medical costs were estimated using patient-level data from the 1997–2007 surveillance, epidemiology, and end results (SEER)-Medicare datasets for patients diagnosed through 2005. Incremental cost-effectiveness ratio (ICER) was calculated and expressed as cost per life-year

gained. **RESULTS:** Patients were categorized into 5FU/LV (n = 2,834), oxaliplatin based (n = 621), and irinotecan based (n = 945) subgroups, based on the regimen they received. The median improvement in overall survival with 5FU/LV, irinotecan or oxaliplatin based combination therapy was 1.25, 1.34, and 1.72 life-years, respectively. The incremental cost with irinotecan or oxaliplatin based combination therapy compared with 5FU/LV was $205,837 and $93,651, respectively. When comparing to irinotecan based combination therapy, the incremental cost-effectiveness ratio of oxaliplatin based combination therapy was $67,637 per life-year gained. **CONCLUSIONS:** This analysis suggests that oxaliplatin or irinotecan based combination therapy improves overall survival but also substantially increases direct medical costs compared with 5FU/LV when used in elderly US patients with stage IV colon cancer. Oxaliplatin-based regimens are more cost-effective than irinotecan based regimens.

PCN61

THE COST-EFFECTIVENESS OF CETUXIMAB USE AMONG ELDERLY METASTATIC COLORECTAL CANCER PATIENTS

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OBJECTIVES: The cost-effectiveness of cetuximab has been controversial mainly because of its marginal clinical benefits at very high medication cost. This study examines the cost-effectiveness of cetuximab versus best supportive care in the patients with metastatic colorectal cancer in US from the perspective of Medicare. **METHODS:** As modeled in a decision tree, three treatment options (cetuximab, cetuximab plus irinotecan, and best supportive care) are evaluated clinically and economically. Costs of cetuximab treatment options are largely determined by the treatment responses: complete or partial responsive, stable disease, or progressive, and whether or not the patient experienced severe infusion reaction and/or severe adverse events. The primary outcome is quality-adjusted life expectancy. The treatment response rates and quality of life measurements are based on the results from clinical trials. Incremental cost-effectiveness ratios (ICER) between cetuximab treatments and best supportive care are presented to demonstrate the value of cetuximab treatments. Finally, sensitivity analyses are conduct to test the robustness of the results. **RESULTS:** In the patients with metastatic colorectal caner, the incremental cost per quality-adjusted life year (QALY) was $336,218 for cetuximab, and $318,609 for cetuximab plus irinotecan, in comparison with best supportive care. One-way sensitivity analyses showed that the cost of cetuximab had the highest impact on ICERs, compared to other costs and quality of life parameters. Probabilistic sensitivity analyses by Monte Carlo simulation demonstrated that best supportive care is more cost-effective than cetuximab treatments until the threshold of willingness to pay is raised up to $240,000. **CONCLUSIONS:** Our analyses suggest that cetuximab is not cost-effective, either in monotherapy or in combination with irinotecan, as the cost-effectiveness ratios are far beyond the accepted threshold of $50,000 per QALY gained. Cetuximab treatments need to be carefully evaluated before being delivered to metastatic colorectal cancer patients.

PCN62

COST EFFECTIVENESS OF RADICAL PROSTATECTOMY VERSUS WATCHFUL WAITING FOR NON-SCREEN DETECTED PROSTATE CANCER: EXTRAPOLATING FROM THE SCANDINAVIAN TRIAL

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OBJECTIVES: The benefit of screening for and definitive treatment for prostate cancer has been questioned. Results from the Scandinavian study of radical prostatectomy compared to watchful waiting for non-screen detected prostate cancer demonstrated decrease in prostate cancer specific mortality, palliative treatment and overall survival. We evaluated the cost effectiveness of radical prostatectomy compared to watchful waiting using data from the Scandinavian study protocol when extrapolated to the US. **METHODS:** We used the previously reported cost of care data for patients with prostate cancer based on the patterns of care observed in the CaPSURE database. The data from the Scandinavian trial, in accordance with the study protocol, was used to determine the costs and cost-effectiveness of radical prostatectomy for treatment of prostate cancer. The cost-effectiveness for radical prostatectomy was determined and was adjusted for the costs of androgen deprivation therapy as used in each study arm. A model incorporating age at diagnosis, life expectancy and estimate of benefits from radical prostatectomy was created that predicts cost effectiveness of surgical intervention for prostate cancer. A sensitivity analysis was performed to test the robustness of results. **RESULTS:** Compared to watchful waiting, radical prostatectomy is associated with savings of $92,259 per life saved or $4,128 per LYS. When the rate of treatment with ADT in each study arm is taken into account, radical prostatectomy for treatment of non-screen detected prostate cancer is associated with cost savings of $475,297 per life saved or savings of $27,959 per life-year saved compared to the costs of watchful waiting. **CONCLUSIONS:** Radical prostatectomy is a cost effective treatment for non-screen detected prostate cancer. Treatment with radical prostatectomy is associated with significant cost savings, improved survival, decreased rate of metastatic disease and lower rate of palliative care compared to watchful waiting. For patients who are surgical candidates watchful waiting is associated with higher morbidity, mortality and costs.

PCN63

THE COST-EFFECTIVENESS OF MOHS MICROGRAPHIC SURGERY VERSUS SURGICAL EXCISION FOR THE TREATMENT OF NON-MELANOMA SKIN CANCER

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OBJECTIVES: Compare cost-effectiveness of three non-melanoma skin cancer (NMSC) strategies: all Mohs Micrographic Surgery (MMS), all surgical excision and mixed MMS and excision. **METHODS:** A decision-analytic model compared strategies using data from a prospective sample (n = 540) treated with MMS or excision at a university-affiliated dermatology clinic from 1999–2000. The newest (2007) Medicare costing rules with tumor size, location and number of stages for MMS were used. Total cost included the procedure, pathology, drugs, 2 month follow-up visits, secondary procedures, repairs or grafts and recurrences. Short Form (SF)-12 and Skindex scores at baseline and 2 years were mapped to the Health Utility Index (HUI) to adjust life expectancy and recurrence, our major outcomes. Cost per quality adjusted life year saved (QALYS) was the final outcome. Sensitivity analysis tested uncertainty of model parameters. **RESULTS:** The all MMS strategy was most cost-effective when compared to mixed (ICER = $30,521/QALYS) and all excision strategies (ICER = $6,722/QALYS). The mixed strategy was cost-effective compared to the all excision strategy (ICER = $1,924/QALYS). All excision was least costly ($1634.50/patient), mixed next ($1681.00/patient) and all MMS was most costly ($1830.10/patient). The all MMS strategy (17.2081 QALYS) was most effective compared to mixed (17.2032 QALYS) and all excision (17.1790 QALYS) strategies. The model is sensitive to the proportion of patients who receive MMS versus excision in the mixed strategy. The all MMS strategy no longer is cost-effective compared to the mixed strategy when the MMS proportion is decreased from 58.8% to 50% (ICER = $2,793,794) and at 45% the mixed strategy dominates all other strategies. Not until $900 is added to procedure cost for MMS, does the all MMS strategy lose its cost-effectiveness. **CONCLUSIONS:** All MMS for NMSC is the most cost-effective strategy although the mixed strategy is preferred in some mixtures of patient populations. This analysis demonstrates that MMS is cost-effective if clinically indicated.

PCN64

COST-EFFECTIVENESS ANALYSIS OF SORAFENIB VERSUS BEST SUPPORTIVE CARE (BSC) IN ADVANCED HEPATOCELLULAR CARCINOMA (AHCC): THE PUBLIC HEALTH CARE SYSTEM PERSPECTIVE IN BRAZIL

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OBJECTIVES: Sorafenib is the only agent that has proven to improve survival in AHCC (Llovet, NEJM 2008), and has been considered cost-effective in Canada (Muszbek, Curr Med Res Opin 2008), when compared with BSC. In clinical practice in Brazil, however, patients with AHCC with no access to sorafenib are often treated with other systemic agents, none of which are able to improve the outcome. The objective of this study was to evaluate the cost-effectiveness of sorafenib+BSC vs BSC alone in Brazil, from the perspective of the public health-care system. **METHODS:** A Markov model was developed to project the lifetime survival and costs for both interventions using data from the TTP and OS Kaplan-Meier curves from SHARP trial using a log-normal distribution and an *ad hoc* panel with Brazilian medical oncologists, hepatologists, and liver surgeons. Treatment effectiveness was measured in life-years gained (LYG). Resource utilization included drug, administration, physician visits, monitoring, and adverse events. Costs (in R$, with R$ 1.00 ~ US$ 0.58) and survival benefits were discounted annually at 5%. Univariate and probabilistic sensitivity analyses were conducted. **RESULTS:** Lifetime per-patient costs in R$ (US$) were 76,032 (43,447) and 9,776 (5,586) for sorafenib+BSC and BSC alone, respectively. Sorafenib drug cost accounted for nearly 79% of treatment costs. The incremental survival benefit with sorafenib+BSC was 0.49 life-years. The incremental cost-effectiveness ratio of sorafenib+BSC vs BSC alone was R$ 135,262 (US$ 77,293) per LYG. Variations in the lognormal parameters for OS of both alternatives demonstrated to be the most influential variables in the cost-effectiveness result in the deterministic sensitivity analysis. **CONCLUSIONS:** The addition of sorafenib to BSC is the only intervention that has been found to improve survival in AHCC and the cost-effectiveness results should be interpreted considering the low cost and inefficiency of the comparator.

PCN65

A COST-EFFECTIVENESS ANALYSIS OF THE FIRST-LINE TREATMENT REGIMENS FOR MULTIPLE MYELOMA IN MACAO CHINA

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OBJECTIVES: Multiple myeloma (MM) is a hematologic malignancy mainly affecting the elderly population. It is incurable and patients experience a considerable reduction of health-related-quality-of-life (HRQoL). Some newer therapies have shown better clinical effects but are more costly. Pharmacoeconomic studies on MM have been widely conducted overseas but local data was lacking. This study aimed to examine the cost-effectiveness of the treatments for MM in Macao, China. **METHODS:** A retrospective cost-effectiveness study with HRQoL assessment was conducted. Forty patients from the largest public hospital in Macao from 1997–2007 with confirmed MM were studied. Data for costs and treatment effects were extracted from patients'